

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 09/903,481

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): An electrolysis method wherein a positive electrode and a negative electrode are immersed in electrolyte in an electrolysis tank to cause electrolysis to occur, comprising the step of:

applying an opposite magnetic field for canceling a magnetic field produced by main electric current and ion current flowing in the electrolyte from said positive electrode to said negative electrode,

wherein an electric field is increased by an auxiliary positive electrode coated with an electric insulating material and disposed at a position in the proximity of said positive electrode remote from said negative electrode.

2. (Original) An electrolysis method as claimed in claim 1, wherein electric current of a direction opposite to that of the main electric current and the ion current flowing in the electrolyte from said positive electrode to said negative electrode is supplied to an electric circuit provided between but separate from said positive electrode and said negative electrode to produce the opposite magnetic field which cancels the magnetic field produced by the main electric current and the ion current flowing in the electrolyte.

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3. (currently amended): An electrolysis method as claimed in claim 1 wherein a positive electrode and a negative electrode are immersed in electrolyte in an electrolysis tank to cause electrolysis to occur, comprising the step of:

applying an opposite magnetic field for canceling a magnetic field produced by main electric current and ion current flowing in the electrolyte from said positive electrode to said negative electrode,

wherein the opposite magnetic field which cancels the magnetic field produced by the main electric current and the ion current flowing in the electrolyte is produced using a permanent magnet or an electromagnet.

Claim 4 (canceled).

5. (Original) An electrolysis method as claimed in claim 1, wherein said negative electrode is made of a hydrogen occluding substance and occludes hydrogen atomic nuclei.

6. (Original) An electrolysis method wherein a positive electrode and a negative electrode are immersed in electrolyte in an electrolysis tank to cause electrolysis to occur, comprising the step of:

using, as said electrolysis tank, an electrolysis tank which is partitioned into a positive electrode tank and a negative electrode tank by an electrically insulating nonmagnetic partition having an opening through which the electrolyte can communicate between said positive

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electrode tank and said negative electrode tank and in which said positive electrode is disposed in said positive electrode tank and said negative electrode is disposed in said negative electrode tank to perform electrolysis wherein main electric current and ion current flowing in the electrolyte from said positive electrode through said opening to said negative electrode flows in the opposite directions to each other at a place from said positive electrode to said opening and another place from said opening to said negative electrode across said partition thereby to produce magnetic fields which cancel each other.

7. (Original) An electrolysis method as claimed in claim 6, wherein said negative electrode is made of a hydrogen occluding substance and occludes hydrogen atomic nuclei.

Claims 8 and 9 (canceled).

10. (Original) An electrolysis apparatus, comprising:
an electrolysis tank; and
a positive electrode and a negative electrode immersed in electrolyte in said electrolysis tank to cause electrolysis to occur;
said electrolysis tank being partitioned into a positive electrode tank and a negative electrode tank by an electrically insulating nonmagnetic partition having an opening through which the electrolyte can communicate between said positive electrode tank and said negative electrode tank, said positive electrode being disposed in said positive electrode tank while said

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negative electrode is disposed in said negative electrode tank to perform electrolysis wherein main electric current and ion current flowing in the electrolyte from said positive electrode through said opening to said negative electrode flows in the opposite directions to each other at a place from said positive electrode to said opening and another place from said opening to said negative electrode across said partition thereby to produce magnetic fields which cancel each other.